

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PG 06106WO	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/003143	International filing date (<i>day/month/year</i>) 25.03.2004	Priority date (<i>day/month/year</i>) 31.03.2003
International Patent Classification (IPC) or national classification and IPC		
<p>Applicant VOITH TURBO GMBH & CO. KG</p>		

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 4 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>																									
<p>4. This report contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">Box No. I</td> <td style="width: 70%;">Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003143

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- international search (Rule 12.3 and 23.1(b))
- publication of the international application (Rule 12.4)
- international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished
 the description:

pages 2-19 as originally filed/furnished
 pages* 1, 1a received by this Authority on 20.05.2005 with letter of 18.05.2005

pages* _____ received by this Authority on _____

the claims:
 nos. _____ as originally filed/furnished
 nos.* _____ as amended (together with any statement) under Article 19
 nos.* 1-7 received by this Authority on 20.05.2005 with letter of 18.05.2005
 nos.* _____ received by this Authority on _____

the drawings:
 sheets 1/11-11/11 as originally filed/furnished
 sheets* _____ received by this Authority on _____
 sheets* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

- the description, pages _____
- the claims, nos. _____
- the drawings, sheets/figs _____
- the sequence listing (*specify*): _____
- any table(s) related to sequence listing (*specify*): _____

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages _____
- the claims, nos. _____
- the drawings, sheets/figs _____
- the sequence listing (*specify*): _____
- any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003143

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	
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1. Statement

Novelty (N)	Claims	1 - 7	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 7	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 7	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

This report makes reference to the following documents:

D1: WO-A-81/01444

D2: DE-A-812660

D3: EP-A-0120654

D4: US-A-4239977

D5: US-A-4586400

D6: EP-A-0635639

1. Novelty of independent claim 1

Document D1, which is considered to represent the closest prior art, shows and describes (the references in parentheses are to that document):

a drive train for transmitting a variable power with a variable input speed for a power generation plant (abstract) driven by a turbomachine (1) such as a wind turbine or water turbine; with a power branching gear (4, 6, 7, 8, 9, 10, 11, 14) for splitting the power between at least one first power branch and at least one second power branch (figure 2); the first power branch (14) drives at

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003143

Box No. V**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

least indirectly an electric generator (26); a connection between the first power branch and the second power branch is established by means of a hydraulic circuit (20, page 4, lines 6-13) arranged on the output side of the power branching gear (figure 2), and the power flow is influenced by the hydraulic circuit in such a way that the rotational speed at which the electric generator is driven is substantially constant (page 3, lines 1-3).

The subject matter of claim 1 differs from the known drive train in that the hydraulic circuit is a hydrodynamic circuit.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

2. Inventive step of independent claim 1

The present invention can therefore be considered to address the problem of providing an alternative control of the known drive train, ensuring high transmission efficiency and minimising jolts in the drive train, while keeping low the number of components and investment costs.

The solution to this problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)) because the combination of features contained in claim 1 does not appear to be either known from or suggested by the available prior art.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/003143

Box No. V**Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****3. Industrial applicability**

The subject matter of claim 1 appears to meet the requirements of PCT Article 33(4) since it can be produced and also used at least in the field of transmission technology.

4. Dependent claims

Claims 2-7 are dependent on claim 1 and thus also meet the PCT novelty and inventive step requirements.